STATE ADMINISTRATION IN STATE

Montana SAVA

Confirmation of Final Cost Analysis Teachers' Retirement System

August 17, 2010



buckconsultants

- Cavanaugh Macdonald Review of cost analysis and 30-year projections prepared by
- Analysis included:
- Comparison of Normal Costs
- Projections of impact on funded ratios and contribution requirements
- Actuarial assumptions used include changes adopted this year
- Plan Alternatives Studied:
- Money Purchase Plan
- combinations with projections prepared on two combinations Modified DB Plan with Professional Retirement Option (PRO), Normal Cost Rates calculated for four vesting/final average compensation period

- Modified Defined Benefit Plan with PRO
- New member contributions will increase to fund the PRO
- Multiplier applied to all years of service:
- 1.667% if service is less than 30 years
- 2.0% if service is 30 years or greater
- Four vesting and final average periods (FAC) combinations studied
- 5-year vesting and FAC 3
- 15-year vesting and FAC 3
- 5-year vesting and FAC 5
- 15-year vesting and FAC 5
- Normal Retirement at 60 and vested or any age with 30 years
- Early Retirement at 55 and vested (reduced actuarially)
- Other provisions unchanged from current plan

Teachers' Retirement System

Modified Defined Benefit Plan – Review of Normal Cost

are shown below and compared to our expectation: Normal Cost Rates for the Current Plan and the four combinations

9.74%	9.80%	5-Years	15-Years
10.13%	10.16%	3-Years	15-Years
9.93%	9.89%	5-Years	5-Years
10.32%	10.28%	3-Years	5-Years
	9.74%	ոt Plan	Current Plan
Buck Estimate	Results	FAC	Vesting

- made to assumed retirement rates Costs are based on newly adopted actuarial assumptions with adjustments
- Modified retirement rates for PRO are reasonable
- Changes were very close to our expectation
- Review of individual test cases revealed no major issues

- Modified Defined Benefit Plan Review of Projections
- Reduced Normal Cost Rate is reflected for new members
- Projections are based on an open group projection with a stable population
- Favorable investment return experienced during fiscal year 2010 is reflected
- Generally, the projections appear reasonable
- projected to be slightly lower than the Current Plan by 2039 The funded ratio based on the Modified Defined Benefit Plans are
- rates by 2039 are projected to be slightly greater than the Current Plan's required The required contribution rates based on the Money Purchase Plan
- A change to the Modified Defined Benefit Plan does not result in soundness significant cost savings and additional changes, i.e. contribution increases, would be required to return to ongoing actuarial

- Money Purchase Plan
- Defined benefit, individual account plan
- Employee contribution of 7.15% credited to account
- Account is credited with variable interest between 5.0% and 9.0% with a long-term goal of 7.0%
- 15-Year Graded Vesting
- Retirement eligibility of age 55 and vested
- equivalent to employee account with a 100% employer match Benefits upon retirement, disability or death are actuarially
- 1.5% GABA is included in actuarially equivalent conversion factor
- Pre-retirement lump sum available, equal to member account only

- Money Purchase Plan Review of Normal Cost
- Normal Cost Rate of 9.09% compared to the current plan at 9.74%, a reduction of approximately 7%
- Costs are based on newly adopted actuarial assumptions with out rates for terminated vested members adjustments made to assumed retirement rates and assumed cash
- Retirement rates before age 62 are higher than we would expect
- Change in Normal Cost Rate is very close to our expectation
- Review of individual test cases revealed no major differences from our understanding of the proposed plan provisions

- Money Purchase Plan Review of Projections
- Reduced Normal Cost Rate is reflected for new members
- Projections are based on an open group projection with a stable population
- Favorable investment return experienced during fiscal year 2010 is reflected
- Generally, the projections appear reasonable
- be slightly lower than the Current Plan by 2039 The funded ratio based on the Money Purchase Plan is projected to
- The required contribution rates based on the Money Purchase Plan are projected to be less than those under the Current Plan
- A change to the Money Purchase Plan is would require additional changes, i.e. contribution increases, to return to ongoing actuarial

- Review of Projections
- Projections of the Current Plan show required contributions that are approximately 3.5% of pay above the current contribution rates in
- The plan alternatives studied reduce the Normal Cost Rate by a maximum of .65% of pay
- additional tool for sharing future investment and demographic risks The variable interest credit in the Money Purchase Plan gives an
- Any solution to the forecasted funding shortfalls will likely include increased contributions in addition to plan provision changes